



## Order Testudines: 2013 update\*

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The present paper presents an update of a list of chelonian taxa published in 2011 (Fritz 2011), which generally has followed the “Checklist of chelonians of the world” by Fritz & Havaš (2007). Although chelonians (terrapins, turtles and tortoises) do not constitute a species-rich group, there exists considerable interest in their taxonomy and systematics, a fact being related with the unique morphology, the debated phylogenetic relationships and the delicate conservations status of these reptiles. Consequently, quite a number of taxonomic changes has been proposed in the past two years.

Compared to the 2011 list including 14 families, 94 genera and 317 species of chelonians, the numbers of recognized families and genera increased slightly to 15 and 96. The number of species remained constant, despite some changes as described below. The count of 317 species includes a few island-endemics which became extinct in historical times (see review in Stuckas *et al.* 2013). It could be argued that another extinct island species, *Meiolania damelipi* White *et al.*, 2010, should be added. *Meiolania damelipi* was the last representative of the famous giant ‘horned turtles’ (Meiolaniidae) and disappeared from Efate island (Vanuatu, Southwest Pacific) approximately 3000 years before present, within 300 years after the arrival of humans (White *et al.* 2010).

### Order Testudines Batsch, 1788 (2 suborders)

#### Suborder Cryptodira Cope, 1868 (12 families)<sup>1</sup>

Family **Carettochelyidae** Boulenger, 1887 (1 genus, 1 species)

Family **Cheloniidae** Oppel, 1811 (5 genera, 6 species)

Family **Chelydridae** Gray, 1831 (2 genera, 4 species)<sup>2</sup>

Family **Dermatemydidae** Gray, 1870 (1 genus, 1 species)

Family **Dermochelyidae** Fitzinger, 1843 (1 genus, 1 species)

Family **Emydidae** Rafinesque, 1815 (12 genera, 46 species)<sup>3</sup>

1. Compared to the 2011 list, one additional family is recognized, see under footnote 5.

2. Hoser (2013) named a new species and a new subspecies of *Macrochelys*. These taxa are not recognized here until the situation associated with taxa descriptions by Hoser is clarified (*cf.* Kaiser *et al.* 2013).

3. Species number within *Trachemys* (12 instead of formerly 15) follows the revision of Fritz *et al.* (2012a). However, McCranie *et al.* (2013) suggested that the number of West Indian *Trachemys* species is inflated. Likewise, the current species delimitations within the genus *Pseudemys* seem to be questionable (Spinks *et al.* 2013). In the light of the well known broad-scale intergradation of *Terrapene carolina triunguis* with other subspecies of *T. carolina* (Ernst & Lovich 2009; Butler *et al.* 2011), the recent proposal to treat *T. mexicana* as a distinct polytypic species (with the subspecies *T. m. mexicana*, *T. m. triunguis* and *T. m. yucatanica*; Martin *et al.* 2013) is not followed here.

- Family **Geoemydidae** Theobald, 1868 (19 genera, 68 species)<sup>4</sup>  
 Family **Kinosternidae** Agassiz, 1857 (3 genera, 24 species)<sup>5</sup>  
 Family **Platysternidae** Gray, 1869 (1 genus, 1 species)  
 Family **Staurotypidae** Gray, 1869 (2 genera, 3 species)<sup>6</sup>  
 Family **Testudinidae** Batsch, 1788 (16 genera, 53 species)<sup>7</sup>  
 Family **Trionychidae** Gray, 1825 (13 genera, 31 species)  
 Suborder **Pleurodira** Cope, 1864 (3 families)  
 Family **Chelidae** Gray, 1825 (15 genera, 52 species)<sup>8</sup>  
 Family **Pelomedusidae** Cope, 1868 (2 genera, 18 species)<sup>9</sup>  
 Family **Podocnemididae** Cope, 1868 (3 genera, 8 species)

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4. Based on genetic evidence, Vargas-Ramírez *et al.* (2013) questioned that *Rhinoclemmys diademata*, *R. funerea*, *R. melanosterna* and *R. punctularia* represent distinct species under the Biological Species Concept. However, since these authors did not synonymize the four species, our count still includes the four taxa as distinct species.
5. Iverson *et al.* (2013) elevated the Staurotypinae to the family level. Consequently, *Staurotypus* (containing two species) and the monotypic genus *Claudius* were removed from Kinosternidae. Furthermore, Iverson *et al.* (2013) erected the new genus *Cryptochelys* for the species *C. acuta*, *C. angustipons*, *C. creaseri*, *C. dunni*, *C. herrerae* and *C. leucostoma*, formerly in *Kinosternon*. The former subspecies *K. subrubrum steindachneri* and *K. scorpioides abaxillare* were reclassified in the same paper as full species.
6. Newly recognized family (Iverson *et al.* 2013), see under footnote 5.
7. Species count includes now *Kinixys nogueyi* and *K. zombensis*, formerly subspecies of *K. belliana* (Kindler *et al.* 2012). The synonymy of *Chelonoidis chilensis*, *C. donosobarrosi* and *C. petersi* was confirmed (Fritz *et al.* 2012b).
8. The monotypic genus *Flaviemys* was described by Le *et al.* (2013) to accommodate the species *F. purvisi*, by thus avoiding the paraphyly of *Myuchelys*.
9. *Pelusios seychellensis*, previously thought to be an extinct species endemic to Mahé, Seychelles, was shown to be a junior synonym of the widely distributed West African species *P. castaneus* (Stuckas *et al.* 2013), which is why *Pelusios* contains now only 17 recognized species. However, according to genetic data the existence of additional *Pelusios* species is very likely (Fritz *et al.* 2011, 2013). The second genus of the family, *Pelomedusa*, contains approximately 10 deeply divergent genetic lineages (Vargas-Ramírez *et al.* 2010; Wong *et al.* 2010; Fritz *et al.* 2011), which represent most probably distinct species. However, their taxonomic status needs to be formally assessed and until then, *Pelomedusa* remains monotypic.

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